

Recovery Plan Action Status

Plan Name: Amargosa Vole (*Microtus californicus scirpensis*) Recovery Plan

Plan Status: Final

Plan Date: 15-Sep-97

Lead Agency: USFWS

Lead Office: Ventura Fish And Wildlife Office

(805)

644-1766)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Amargosa vole (<i>Microtus californicus scirpensis</i>)	1	111	Identify vole habitat	Ongoing Not Current	FY 1995 - FY 1999		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, California Department of Fish and Game, The Nature Conservancy	Research: Habitat Status	Internal Field Assistance	Work not performed by BRD. Habitat has been mapped by McClenaghan and Montgomery 1998, but this map may not be current given the likely fluctuations in marsh habitat
Amargosa vole (<i>Microtus californicus scirpensis</i>)	1	112	Identify groundwater sources and springs	Ongoing Current	FY 1995 - FY 1999		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, California Department of Fish and Game, The Nature Conservancy	Research: Other Information	Internal Field Assistance	We know the location of the spring sources for all amargosa vole marshes. In addition, the groundwater paths that support these springs have been modeled by USGS. However, more groundwater testing and modeling is needed to be certain of the USGS predictions.
Amargosa vole (<i>Microtus californicus scirpensis</i>)	1	121	Secure groundwater and springs critical to maintain and enhance upland and protected lowland habitats	Not Started			U.S. Bureau of Land Management, National Park Service, California Department of Fish and Game, The Nature Conservancy	Acquisition: General	Internal Administrative	
Amargosa vole (<i>Microtus californicus scirpensis</i>)	1	1221	Identify geothermal ownership that can affect habitat	Not Started			U.S. Bureau of Land Management	Research: Other Information	Internal Technical Assistance	
Amargosa vole (<i>Microtus californicus scirpensis</i>)	1	1222	Remove geothermal threats	Not Started			U.S. Bureau of Land Management	Management: Land Use	Internal Administrative	

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Amargosa vole (Microtus californicus scirpensis)	1	123	Remove tamarisk from upland and protected habitats	Ongoing Current	FY 2006		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, The Nature Conservancy	Management: Habitat Maintenance and Manipulation	Contract	The BLM and TNC have begun removal of saltcedar from several areas along the Amargosa River. Removals in some of these areas are likely benefiting the quantity and quality of Amargosa vole habitat.
Amargosa vole (Microtus californicus scirpensis)	1	124	Maintain integrity of historic railbeds to prevent flooding of protected lowland habitats	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management	Management: Other	Internal Field Assistance	Railbed is currently in good condition. BLMs proposed Amargosa ACEC plan has provisions in it for continued monitoring and adaptive management.
Amargosa vole (Microtus californicus scirpensis)	1	125	Prevent further loss of habitat of water quality by construction activities	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management	Management: Land Use	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	1	13	Identify threats to the vole	Unknown			U.S. Bureau of Land Management, California Department of Fish and Game	Research: Other Information	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	1	14	Develop interim management plan	Unknown	FY 2000 - FY 2004		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Planning	Internal Administrative	The ROD for the BLM's Amargosa River ACEC Plan will be signed this CY. This plan seeks to implement almost all of the provisions in the Amargosa vole recovery plan.
Amargosa vole (Microtus californicus scirpensis)	1	15	Implement interim management plan	Not Started			U.S. Bureau of Land Management, The Nature Conservancy	Management: General	Contract	Implementation will begin with signature of the ROD for the Amargosa River ACEC Plan.

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Amargosa vole (Microtus californicus scirpensis)	1	21	Estimate population size of all habitat patches	Not Started			U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Population Surveys	Species Expert	Although this action may be possible, it may not provide us with useful information on species status because populations likely fluctuate seasonally and annually by a large magnitude.
Amargosa vole (Microtus californicus scirpensis)	1	22	Obtain demographic data	Ongoing Not Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Demographic Studies	Species Expert	Some demographic data was collected during a distribution and abundance study performed in 1998 by McLenaghan and Montgomery (SDSU) for CDFG. More surveys are needed to look at trends and to provide supplemental information.
Amargosa vole (Microtus californicus scirpensis)	2	23	Collect tissue samples	Partially Complete	FY 2000 - FY 2004		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Genetics	Species Expert	Work not performed by BRD. Samples were taken in 2000 by Jennifer Nuewald (SDSU). Analysis was done that looked at the genetic diversity of the populations. Additional samples may need to be taken for future genetic questions.
Amargosa vole (Microtus californicus scirpensis)	2	24	Analyze population data	Partially Complete	FY 1995 - FY 1999		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Population Surveys	Graduate Student	We have reports from Jennifer Nuewald (2001) and McClenaghan and Montgomery (1998). Other than the analysis they performed, there has been no additional field work that collected any population data for such analysis.

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Amargosa vole (Microtus californicus scirpensis)	2	31	Quantify habitat characteristics	Not Started			U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Habitat Requirements	Graduate Student	
Amargosa vole (Microtus californicus scirpensis)	2	32	Determine temporal and spacial patterns of habitat use	Not Started			U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Habitat Requirements	Species Expert	
Amargosa vole (Microtus californicus scirpensis)	2	331	Evaluate habitat conditions of Tecopa Lake Basin and Amargosa Canyon	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: General	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	332	Evaluate habitat conditions of Shoshone Area	Ongoing Current	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: General	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	341	Analyze habitat area	Not Started	Prior to FY 1995		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Habitat Status	Internal Field Assistance	

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Amargosa vole (Microtus californicus scirpensis)	2	342	Develop management protocol	Not Started	FY 2000 - FY 2004		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Management: Habitat Maintenance and Manipulation	Internal Technical Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	41	Genetic analysis	Partially Complete	FY 2000 - FY 2004		U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Genetics	Graduate Student	Some work performed by Nuewald (2001). Additional questions may need to be addressed with further research.
Amargosa vole (Microtus californicus scirpensis)	2	42	Evaluate progress toward recovery objective	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service	Management: Planning	Internal Administrative	
Amargosa vole (Microtus californicus scirpensis)	2	51	Determine effects of threats	Not Started	Prior to FY 1995		U.S. Bureau of Land Management	Research: Other Information	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	52	Implement habitat/vegetation enhancement	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Management: Habitat Maintenance and Manipulation	Contract	
Amargosa vole (Microtus californicus scirpensis)	2	53	Reduce competitive fauna	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Management: Habitat Maintenance and Manipulation	Contract	
Amargosa vole (Microtus californicus scirpensis)	2	541	Determine if establishment of rehabilitation of habitat is necessary	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game, The Nature Conservancy	Research: Habitat Status	Internal Technical Assistance	

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Amargosa vole (Microtus californicus scirpensis)	2	542	Locate site(s) for experimental translocation of voles	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Reintroduction	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	543	Complete habitat rehabilitation prior to reintroducing voles	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Habitat Maintenance and Manipulation	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	544	Obtain voles for translocation	Not Started			U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Reintroduction	Species Expert	
Amargosa vole (Microtus californicus scirpensis)	2	545	Reintroduce voles	Not Started			U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Reintroduction	Species Expert	
Amargosa vole (Microtus californicus scirpensis)	2	546	Monitor success of reintroduction	Not Started			U.S. Bureau of Land Management, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Reintroduction	Species Expert	
Amargosa vole (Microtus californicus scirpensis)	2	547	Continue with translocations as necessary	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Reintroduction	Species Expert	

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Amargosa vole (Microtus californicus scirpensis)	2	61	Develop monitoring protocol and conduct yearly small mammal and vegetation surveys	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Internal Field Assistance	
Amargosa vole (Microtus californicus scirpensis)	2	62	Update map of habitat and population trends	Not Started			U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Research: Population Surveys	Internal Administrative	
Amargosa vole (Microtus californicus scirpensis)	2	63	Modify management plans	Ongoing Current	FY 2000 - FY 2004		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Management: Planning	Internal Administrative	BLMs Amargosa River ACEC plan is the revision former management plan for this area.
Amargosa vole (Microtus californicus scirpensis)	2	71	Develop a public outreach program	Planned	FY 2000 - FY 2004		U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, California Department of Fish and Game	Other: Information and Education	Internal Administrative	Planned as part of the BLMs Amargosa River ACEC Plan